

960296_99004_Seq_Lst
SEQUENCE LISTING

<110> Chapman, Edwin R.
Dong, Min

<120> BOTULINUM NEUROTOXIN B RECEPTORS AND USE THEREOF

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Page 11

35

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40 45

Asn Glu Leu His Lys Ile Pro Leu Pro Pro Trp Ala Leu Ile Ala Ile
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Ala Ile Val Ala Val Leu Leu Val Leu Thr Cys Cys Phe Cys Ile Cys
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Lys Lys Cys Leu Phe Lys Lys Asn Lys Lys Lys Gly Lys Glu Lys
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Gly Gly Lys Asn Ala Ile Asn Met Lys Asp Val Lys Asp Leu Gly Lys
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Thr Met Lys Asp Gln Ala Leu Lys Asp Asp Asp Ala Glu Thr Gly Leu
115 120 125

Thr Asp Gly Glu Glu Lys Glu Glu Pro Lys Glu Glu Lys Leu Gly
130 135 140

Lys Leu Gln Tyr Ser Leu Asp Tyr Asp Phe Gln Asn Asn Gln Leu Leu
145 150 155 160

Val Gly Ile Ile Gln Ala Ala Glu Leu Pro Ala Leu Asp Met Gly Gly
165 170 175

Thr Ser Asp Pro Tyr Val Lys Val Phe Leu Leu Pro Asp Lys Lys Lys
180 185 190

Lys Phe Glu Thr Lys Val His Arg Lys Thr Leu Asn Pro Val Phe Asn
195 200 205

Glu Gln Phe Thr Phe Lys Val Pro Tyr Ser Glu Leu Gly Gly Lys Thr
210 215 220

Leu Val Met Ala Val Tyr Asp Phe Asp Arg Phe Ser Lys His Asp Ile
225 230 235 240

Ile Gly Glu Phe Lys Val Pro Met Asn Thr Val Asp Phe Gly His Val
245 250 255

Thr Glu Glu Trp Arg Asp Leu Gln Ser Ala Glu Lys Glu Glu Gln Glu
260 265 270

Lys Leu Gly Asp Ile Cys Phe Ser Leu Arg Tyr Val Pro Thr Ala Gly
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960296_99004_Seq_Lst
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Val Gly Gly Leu Ser Asp Pro Tyr Val Lys Ile His Leu Met Gln Asn
305 310 315 320

Gly Lys Arg Leu Lys Lys Lys Thr Thr Ile Lys Lys Asn Thr Leu
325 330 335

Asn Pro Tyr Tyr Asn Glu Ser Phe Ser Phe Glu Val Pro Phe Glu Gln
340 345 350

Ile Gln Lys Val Gln Val Val Thr Val Leu Asp Tyr Asp Lys Ile
355 360 365

Gly Lys Asn Asp Ala Ile Gly Lys Val Phe Val Gly Tyr Asn Ser Thr
370 375 380

Gly Ala Glu Leu Arg His Trp Ser Asp Met Leu Ala Asn Pro Arg Arg
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Pro Ile Ala Gln Trp His Thr Leu Gln Val Glu Glu Glu Val Asp Ala
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Met Leu Ala Val Lys Lys
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Val Ala Pro Ala Thr Thr Ala Thr Met Pro Leu Ala Pro Val Ala

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aag aag aag aag aac aag aag gag aag ggc aaa ggc atg aag aac gcc Lys Lys Lys Lys Asn Lys Lys Glu Lys Gly Lys Gly Met Lys Asn Ala 95 100 105	339
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aca ggc ctg act gaa gga gaa ggt gaa ggc gag gag gag aaa gag cca Thr Gly Leu Thr Glu Gly Glu Gly Glu Glu Glu Lys Glu Pro 125 130 135 140	435
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85 90 95Asn Lys Lys Glu Lys Gly Met Lys Asn Ala Met Asn Met Lys
100 105 110Asp Met Lys Gly Gly Gln Asp Asp Asp Ala Glu Thr Gly Leu Thr
115 120 125Glu Gly Glu Gly Glu Gly Glu Glu Lys Glu Pro Glu Asn Leu Gly
130 135 140Lys Leu Gln Phe Ser Leu Asp Tyr Asp Phe Gln Ala Asn Gln Leu Thr
145 150 155 160Val Gly Val Leu Gln Ala Ala Glu Leu Pro Ala Leu Asp Met Gly Gly
165 170 175Thr Ser Asp Pro Tyr Val Lys Val Phe Leu Leu Pro Asp Lys Lys Lys
180 185 190Lys Tyr Glu Thr Lys Val His Arg Lys Thr Leu Asn Pro Ala Phe Asn
195 200 205Glu Thr Phe Thr Phe Lys Val Pro Tyr Gln Glu Leu Ala Gly Lys Thr
210 215 220Leu Val Met Ala Ile Tyr Asp Phe Asp Arg Phe Ser Lys His Asp Ile
225 230 235 240

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Ile Gly Glu val Lys Val Pro Met Asn Thr Val Asp Leu Gly Gln Pro
245 250 255

Ile Glu Glu Trp Arg Asp Leu Gln Gly Gly Glu Lys Glu Glu Pro Glu
260 265 270

Lys Leu Gly Asp Ile Cys Thr Ser Leu Arg Tyr Val Pro Thr Ala Gly
275 280 285

Lys Leu Thr Val Cys Ile Leu Glu Ala Lys Asn Leu Lys Lys Met Asp
290 295 300

Val Gly Gly Leu Ser Asp Pro Tyr Val Lys Ile His Leu Met Gln Asn
305 310 315 320

Gly Lys Arg Leu Lys Lys Lys Thr Thr Val Lys Lys Lys Thr Leu
325 330 335

Asn Pro Tyr Phe Asn Glu Ser Phe Ser Phe Glu Ile Pro Phe Glu Gln
340 345 350

Ile Gln Lys Val Gln Val Val Val Thr Val Leu Asp Tyr Asp Lys Leu
355 360 365

Gly Lys Asn Glu Ala Ile Gly Lys Ile Phe Val Gly Ser Asn Ala Thr
370 375 380

Gly Thr Glu Leu Arg His Trp Ser Asp Met Leu Ala Asn Pro Arg Arg
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Met
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aga aac atc ttc aag agg aac cag gag ccc att gtg gct ccc gcc acc 165
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Thr Thr Ala Thr Met Pro Leu Ala Pro Ala Ala Pro Ala Asp Asn Ser
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aca gag agc acg ggc acc ggg gag agc caa gaa gac atg ttc gcc aag 261
Thr Glu Ser Thr Gly Thr Gly Ser Gln Glu Asp Met Phe Ala Lys
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Leu Lys Asp Lys Phe Asn Glu Ile Asn Lys Ile Pro Leu Pro Pro
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Trp Ala Leu Ile Ala Met Ala Val Val Ala Gly Leu Leu Leu Thr
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Cys Cys Phe Cys Ile Cys Lys Cys Cys Cys Lys Lys Lys Lys Asn
85 90 95

aag aag gag aag ggc aaa ggc atg aag aac gcc atg aac atg aag gac 453
Lys Lys Glu Lys Gly Lys Met Lys Asn Ala Met Asn Met Lys Lys Asp
100 105 110

atg aag ggg ggc cag gat gat gac gac ggc gag aca ggc ctg act gaa 501
Met Lys Glu Gly Gln Asp Asp Asp Ala Glu Thr Gly Leu Thr Glu
115 120 125

gga gaa gga gaa ggc gag gag gag aaa gag ccc gag aac ctg ggc aaa 549
Gly Glu Gly Glu Gly Glu Glu Glu Lys Glu Pro Glu Asn Leu Gly Lys
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150 155 160

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Gly Val Leu Gln Ala Ala Glu Leu Pro Ala Leu Asp Met Gly Gly Thr
165 170 175

tca gac cct tac gtc aaa gtc ttc ctc ctc cca gac aag aag aag aaa 693
Ser Asp Pro Tyr Val Lys Val Phe Leu Leu Pro Asp Lys Lys Lys Lys
180 185 190

tat gag acc aag gtc cac cgg aag aca ctg aac cca gcc ttc aac gaa 741
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789

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 Val Met Ala Ile Tyr Asp Phe Asp Arg Phe Ser Lys His Asp Ile Ile
 230 235 240

ggg gag gtg aaa gtg ccc atg aac acg gtg gac ctt ggc cag ccc atc
 Gly Glu Val Lys Val Pro Met Asn Thr Val Asp Leu Gly Gln Pro Ile
 245 250 255

gag gaa tgg aga gac cta caa ggc gga gag aag gaa gag cca gag aag
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 370 375 380 385

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atc gcc cag tgg cac tct ctg aag cct gag gaa gaa gtg gat gct ctt
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<212> PRT

<213> Rattus norvegicus

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Ser	Thr	Glu	Ser	Thr	Gly	Thr	Gly	Glu	Ser	Gln	Glu	Asp	Met	Phe	Ala
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Lys	Leu	Lys	Asp	Lys	Phe	Phe	Asn	Glu	Ile	Asn	Lys	Ile	Pro	Leu	Pro
		50			55					60					

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Pro Trp Ala Leu Ile Ala Met Ala Val Val Ala Gly Leu Leu Leu
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Thr Cys Cys Phe Cys Ile Cys Lys Lys Cys Cys Cys Lys Lys Lys
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Asn Lys Lys Glu Lys Gly Lys Met Lys Asn Ala Met Asn Met Lys
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Asp Met Lys Gly Gly Gln Asp Asp Asp Ala Glu Thr Gly Leu Thr
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Glu Gly Glu Gly Glu Gly Glu Glu Lys Glu Pro Glu Asn Leu Gly
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Lys Leu Gln Phe Ser Leu Asp Tyr Asp Phe Gln Ala Asn Gln Leu Thr
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Val Gly Val Leu Gln Ala Ala Glu Leu Pro Ala Leu Asp Met Gly Gly
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Thr Ser Asp Pro Tyr Val Lys Val Phe Leu Leu Pro Asp Lys Lys Lys
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195 200 205

Glu Thr Phe Thr Phe Lys Val Pro Tyr Gln Glu Leu Gly Gly Lys Thr
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Leu Val Met Ala Ile Tyr Asp Phe Asp Arg Phe Ser Lys His Asp Ile
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Ile Gly Glu Val Lys Val Pro Met Asn Thr Val Asp Leu Gly Gln Pro
245 250 255

Ile Glu Glu Trp Arg Asp Leu Gln Gly Gly Glu Lys Glu Glu Pro Glu
260 265 270

Lys Leu Gly Asp Ile Cys Thr Ser Leu Arg Tyr Val Pro Thr Ala Gly
275 280 285

Lys Leu Thr Val Cys Ile Leu Glu Ala Lys Asn Leu Lys Lys Met Asp
290 295 300

Val Gly Gly Leu Ser Asp Pro Tyr Val Lys Ile His Leu Met Gln Asn
305 310 315 320

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Gly Lys Arg Leu Lys Lys Lys Thr Thr Val Lys Lys Lys Thr Leu
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Asn Pro Tyr Phe Asn Glu Ser Phe Ser Phe Glu Ile Pro Phe Glu Gln
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Ile Gln Lys Val Gln Val Val Val Thr Val Leu Asp Tyr Asp Lys Leu
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Gly Lys Asn Glu Ala Ile Gly Lys Ile Phe Val Gly Ser Asn Ala Thr
370 375 380

Gly Thr Glu Leu Arg His Trp Ser Asp Met Leu Ala Asn Pro Arg Arg
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145 150 155 160

Leu Gln Ala Ala Glu Leu Pro Ala Leu Asp Met Gly Gly Thr Ser Asp
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Pro Tyr Val Lys Val Phe Leu Leu Pro Asp Lys Lys Lys Tyr Glu
180 185 190

Thr Lys Val His Arg Lys Thr Leu Asn Pro Ala Phe Asn Glu Thr Phe
195 200 205

Thr Phe Lys Val Pro Tyr Gln Glu Leu Gly Gly Lys Thr Leu Val Met
210 215 220

Ala Ile Tyr Asp Phe Asp Arg Phe Ser Lys His Asp Ile Ile Gly Glu
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Val Lys Val Pro Met Asn Thr Val Asp Leu Gly Gln Pro Ile Glu Glu
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260 265 270

Asp Ile Cys Thr Ser Leu Arg Tyr Val Pro Thr Ala Gly Lys Leu Thr
275 280 285

Val Cys Ile Leu Glu Ala Lys Asn Leu Lys Lys Met Asp Val Gly Gly
290 295 300

Leu Ser Asp Pro Tyr Gly Lys Ile His Leu Met Gln Asn Gly Lys Arg
305 310 315 320

960296_99004_Seq_Lst

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340 345 350

Val Gln Val Val Val Thr Val Leu Asp Tyr Asp Lys Leu Gly Lys Asn
355 360 365

Glu Ala Ile Gly Lys Ile Phe Val Gly Ser Asn Ala Thr Gly Thr Glu
370 375 380

Leu Arg His Trp Ser Asp Met Leu Ala Asn Pro Arg Arg Pro Ile Ala
385 390 395 400

Gln Trp His Ser Leu Lys Pro Glu Glu Glu Val Asp Ala Leu Leu Gly
405 410 415

Lys Asn Lys